FINANCING, MANAGEMENT AND PRICING OF THE CROSS-BORDER GAS PIPELINE PROJECTS IN NORTH AMERICA

United States/China

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Introduction

My name is Lynn Coleman. I'm a partner with the international law firm of Skadden, Arps, Slate, Meagher & Flom LLP, resident in Washington, D.C. My entire career has concerned energy practice, including particularly natural gas pipelines, contracts, government permits, regulation, construction and operation and disputes. I have had the opportunity to see those issues from the viewpoint of a private lawyer representing both natural gas pipelines and producers, as well as from the perspective of an official in the U.S. government. We tried, with some success, to improve the substantive policies and approval process of government agencies as they relate to new pipeline projects.

Natural gas pipelines have a rich history in the U.S. and North America. Large volumes of natural gas have been safely and economically transported for long distances – often from remotely located producing fields to population and industrial centers – for over 70 years. Almost all of these pipelines have been built and financed by the private sector, though subject to extensive government regulation to assure protection of the environment, open access to shippers and reasonable transport rates.

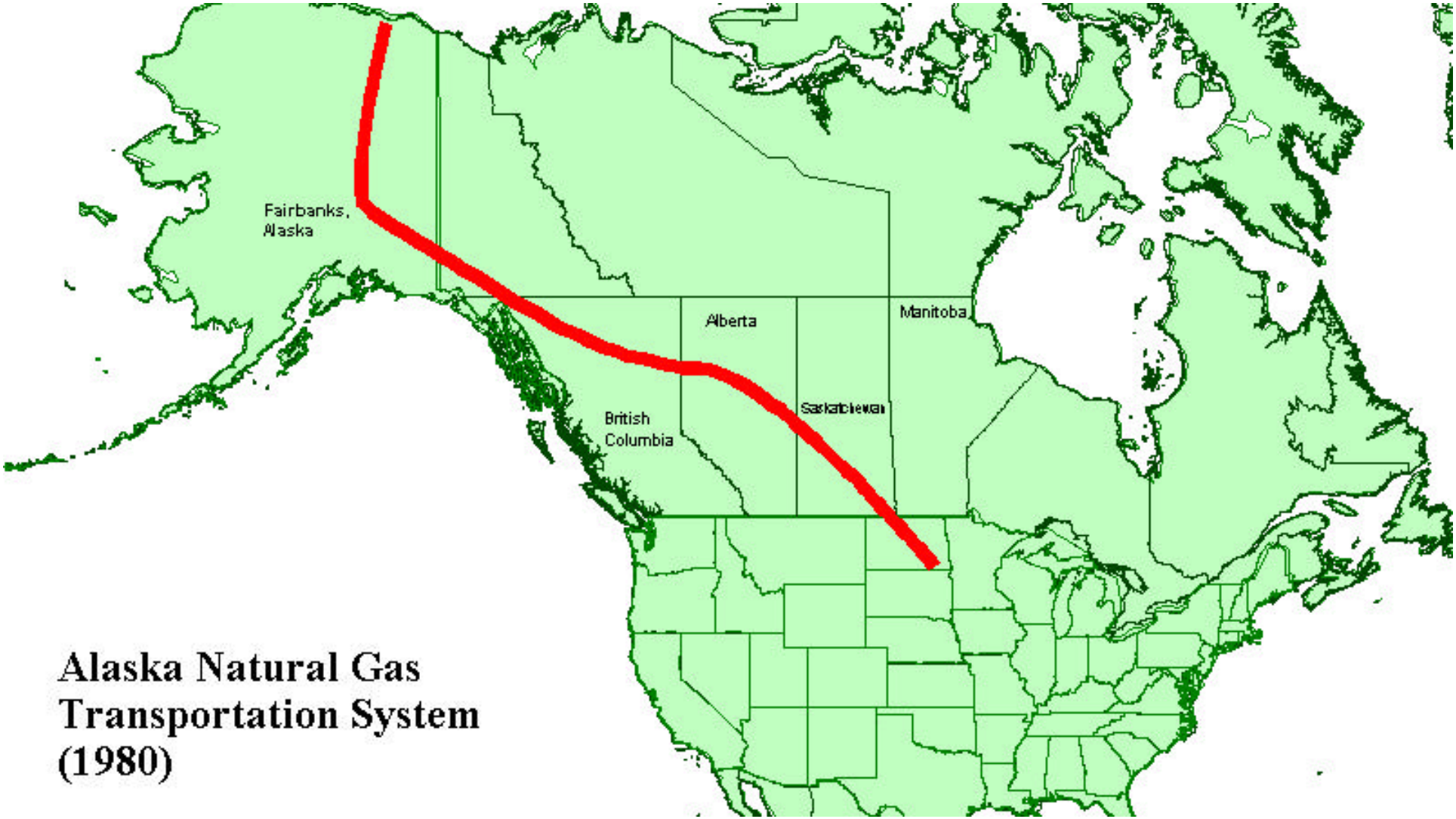
The U.S. Federal Energy Regulatory Commission reports that in the year 2000 there were 114 natural gas pipelines operating in interstate commerce (others operate exclusively within a state) and that 61 of these are considered “major” pipelines, meaning they move more than 50 billion cubic feet of gas per year. After depreciation, total current investment in interstate gas transmission assets is about U.S. $68 billion. There are some old, largely depreciated pipelines still delivering a lot of gas. Natural gas accounts for about 20% of U.S. total energy use. Because of its favorable cost and environmental qualities and reliability as a fuel, the use of natural gas should increase significantly in North America.

Canada and Mexico are also large producers of natural gas. For many years there has been a successful trade across their borders with the U.S. in natural gas. In the case of Mexico, imports and exports tend to even out, but the U.S. is a large net importer of natural gas from Canada. There are about 10 pipelines in Canada which export gas to the U.S. and some U.S. pipelines export gas to Canada. About 15% of U.S. natural gas consumption comes from imports, both through overland pipelines and from liquified natural gas. Over the years governments and private companies have found ways to deal successfully with cross-border movement of natural gas. The current trend is very positive for further development.

My colleague, Mr. Harmon, has provided you an excellent overview of the structure, finance, management and regulation of cross-border pipeline projects. He has provided detailed examples of four recent projects – three successfully completed and one in progress.

As an observer of this industry for many years, however, I must tell you that not all proposed pipeline projects have succeeded. Many have failed and for many reasons. China currently stands at a point of embarkation on greater development of natural gas and long distance transportation to urban and industrial centers. Perhaps it would be useful to mention some U.S. projects that did not “get into the ground”, so that through study, China might avoid failed projects.

1. ANGTS (1980)
2. El Paso Alaska LNG (1975)
3. Northern Natural (Alberta, Canada Project)
4. California LNG (from Indonesia)
5. Yukon Pacific



Alaska Natural Gas Transportation System (1980)

Alaska Natural Gas Transportation System (1980)

Proposal: Overland Pipeline From Prudhoe Bay, Alaska, Through Canada To Midwest U.S.

Reasons For Project Failure

- Overall -- Too big, too costly
- U.S. Regulatory change – requiring new projects to be incrementally priced
- Price and availability of competitive U.S. supply
- Market could not absorb
- Finance not completed

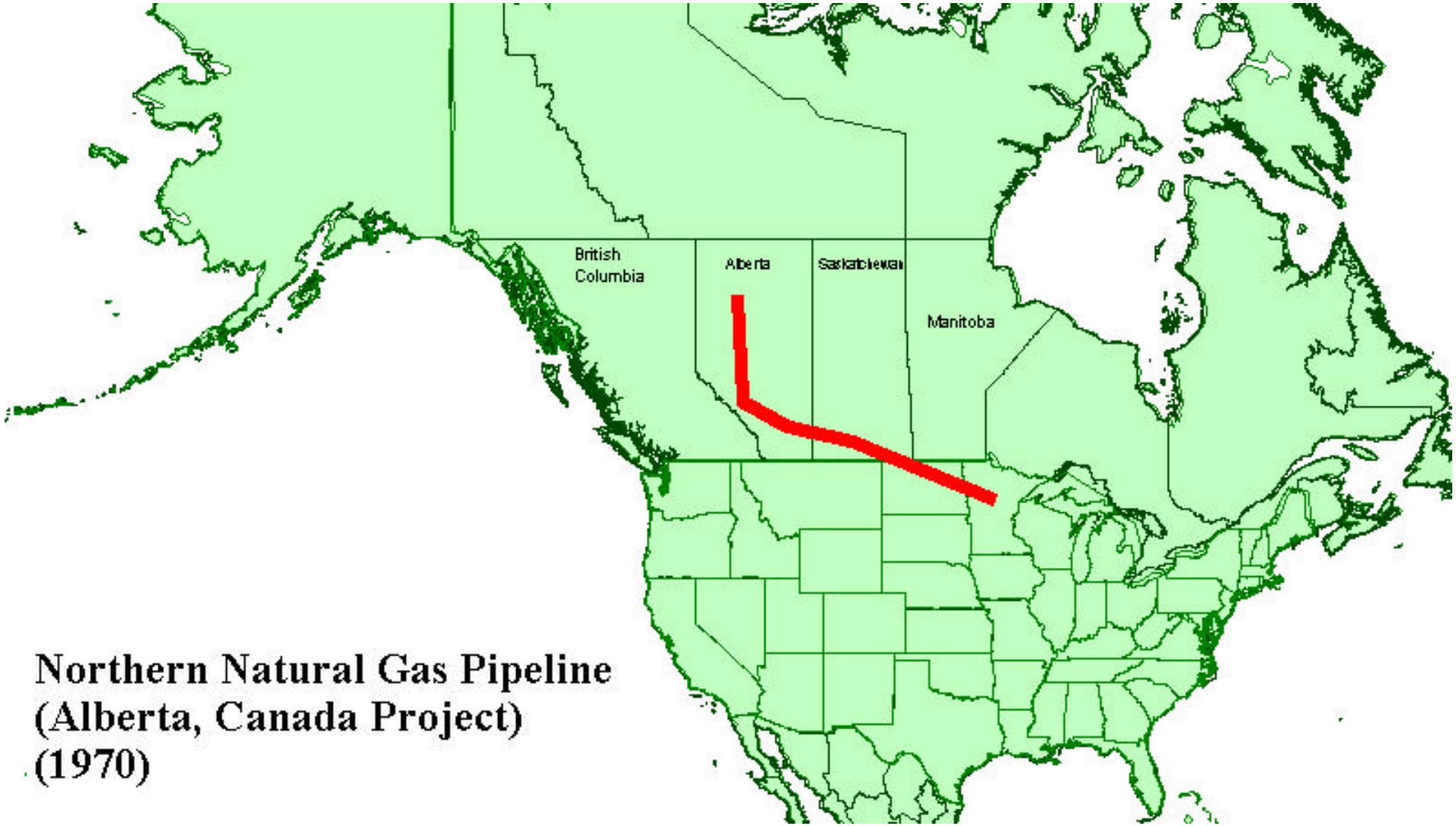
El Paso Alaska Pipeline and LNG (1970s)

El Paso Alaska

Proposal: Overland Pipeline From Prudhoe Bay, Alaska,
To Cook Inslet; LNG To Southern California

Reasons For Project Failure –

- Environmental and Safety Concerns for California LNG
- Inadequate Gas Distribution Plan



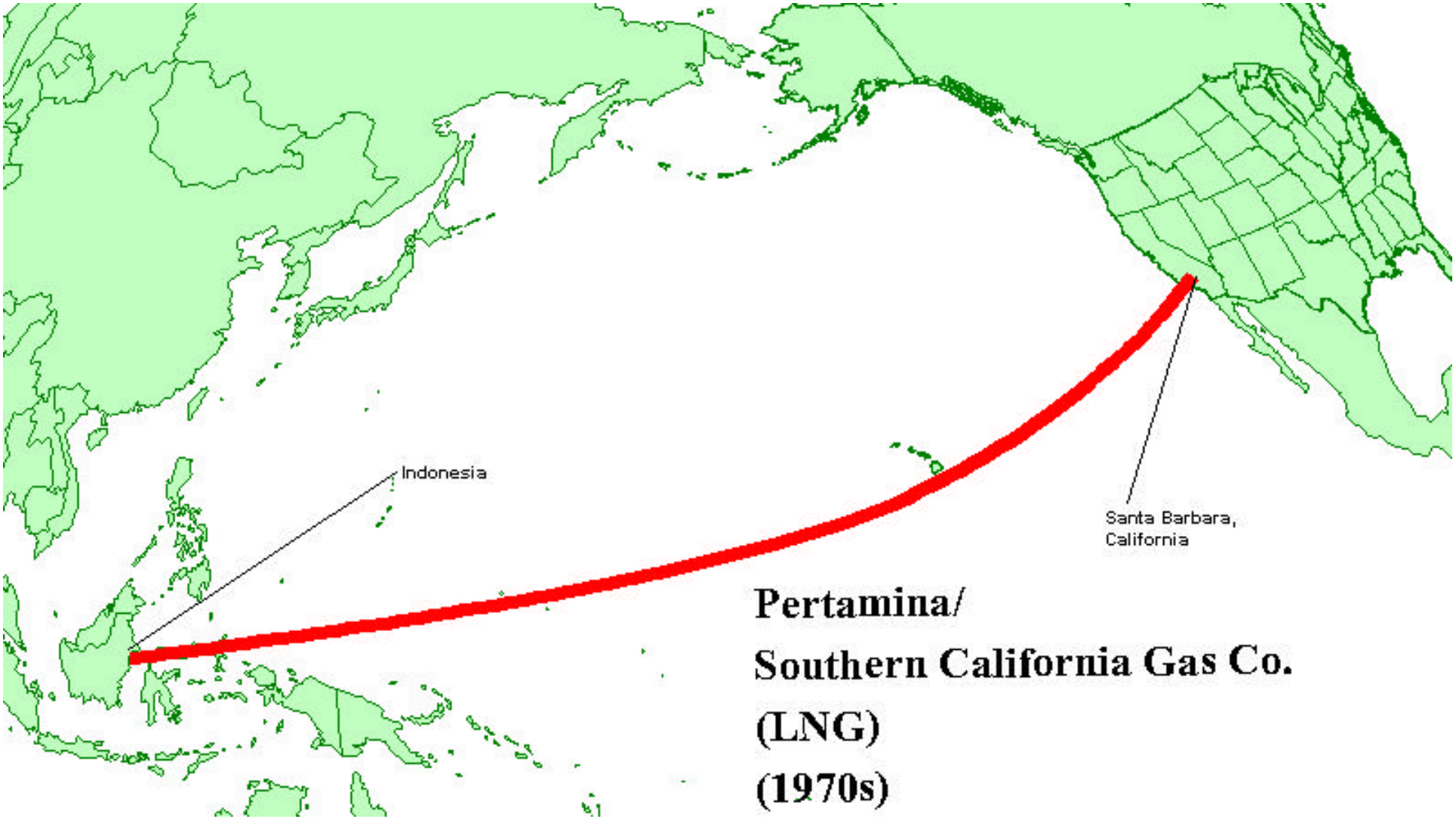
Northern Natural Gas Pipeline (Alberta, Canada Project) (1970)

Northern Natural

Proposal: Overland Pipeline From Reserves In Alberta, Canada
To Midwest U.S.

Reasons for Project Failure –

- Rejected by Federal Power Commission and Canadian National Energy Board
- Insufficient Supply of contracted natural gas
- Rates too high
- Opposition of competitor (TransCanada)

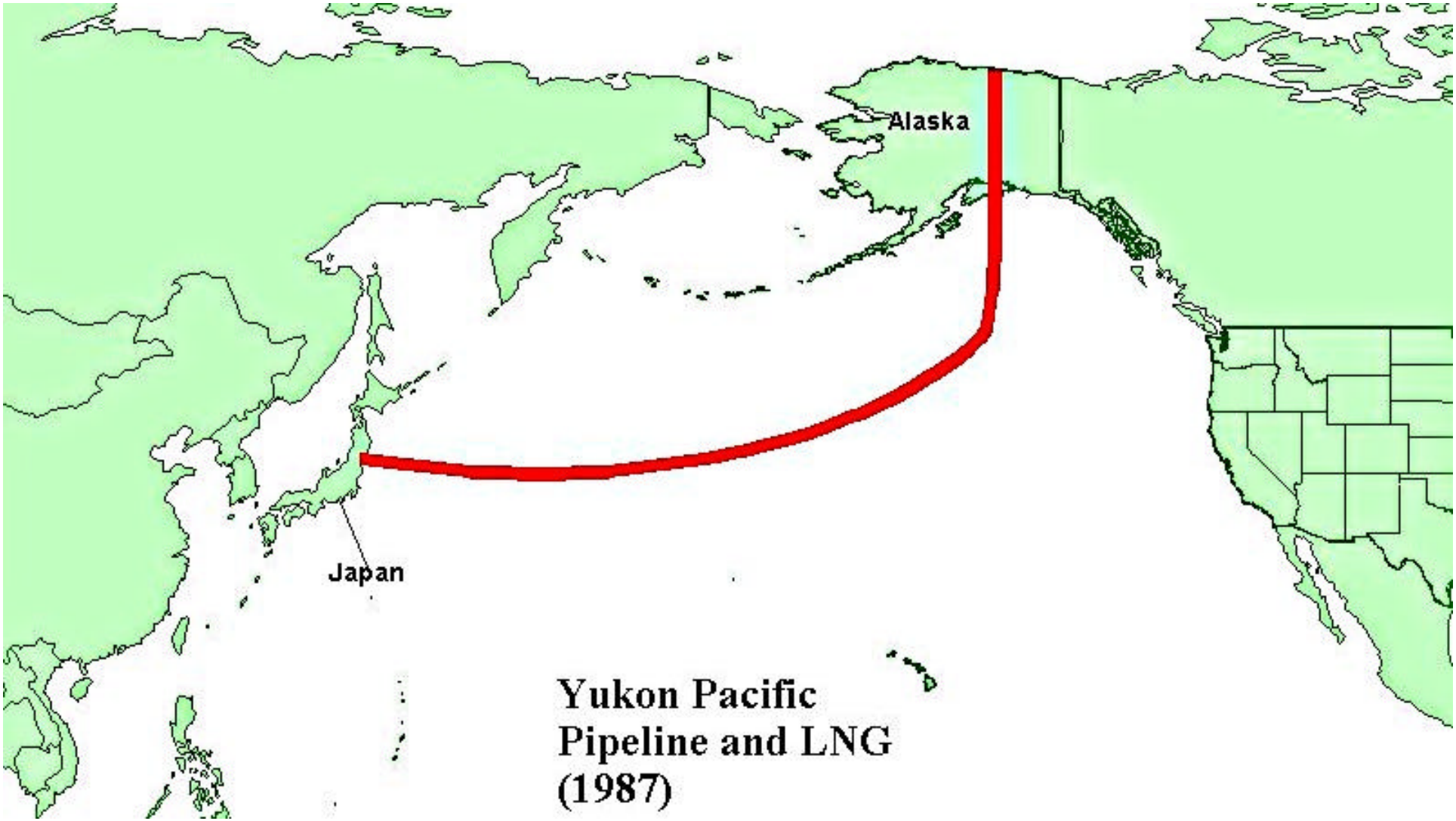

Indonesia
Santa Barbara,
California
Pertamina/
Southern California Gas Co.
(LNG)
(1970s)

Pertamina/Southern California Gas Co

Proposal: LNG From Indonesia To Southern California

Reasons For Project Failure –

- LNG Siting Concerns in Southern California
- Price too high – California regulators would not accept


Alaska
Japan
Yukon Pacific
Pipeline and LNG
(1987)

Yukon Pacific

Proposal: Overland Pipeline From Prudhoe Bay, Alaska To Cook Inslet; LNG To Japan

Reasons For Project Not Yet Succeeding –

- Lack of market in Japan

Lessons to be learned from these project failures in earlier years.

1. *Regulation Changes:*

The government learned some lessons. All of these projects were proposed at a time when the U.S. engaged in extensive economic regulation of pipeline and LNG projects. The Federal Power Commission (and its successor, the Federal Energy Regulatory Commission) would review the need for and economic feasibility of the pipeline in a trial-type administrative proceeding involving alternative proposals and many interveners. The Commission would make detailed findings on the adequacy of the natural gas reserves, design and cost of the pipeline, rates, impact on competitor pipelines and overall economic feasibility. And, finally, the Commission would pick the winner.

This type of regulation had the effect of turning business decisions into legal questions. It was not an effective way to protect the public interest and ultimately changes were made. This system was abandoned in favor of approaches that allow the market to decide market questions and where the government concentrates on assuring the existence of competitive access, guards against extraction of monopoly rents and protects the environment.

These changes have shortened the time in which the government considers pipeline proposals and placed accountability for key business decisions where it belongs -- on the private sector proponents.

2. Market problems

- Supply/demand imbalance
- Price
- Reaction of Regulators

3. Siting difficulties, particularly LNG in California

4. Politics

5. Finance

Finance of Cross-Border Pipelines

Most U.S. natural gas pipelines have been financed with ordinary corporate bond and bank indebtedness. This is true largely for historic reasons concerning the way pipelines were regulated. Project finance (limited recourse) has been utilized in a few but significant cases recently. However, there is no general reason why project financing techniques cannot be successfully utilized. Examples are the Kern River and Mojave Pipelines in the early 1990's and two of the Canadian import projects.

With pipeline projects outside the U.S., use of project finance has been more common.

China has had limited experience with project finance in the electric power sector. It should be possible for project financing techniques to be utilized in the finance of large pipelines and other natural gas facilities in China. While beyond the scope of this presentation, project financing forces scrutiny on the sponsor commitments, all the key contracts (construction, operation and management, supply, pipeline thoughput, sales), credit worthiness of counter parties and the necessary government approvals.